A warm and wet March

Description

Rain may not be the first thing you think about when reflecting on March 2019, but it was in fact the 5th wettest March on record for the UK as a whole.

Much of the rain fell during the first half of March and for many (except north west Scotland) there was a rather dry end to the month. However, for the north and north-western areas of the UK, the rain in the first two weeks was enough to make the month overall very wet indeed.

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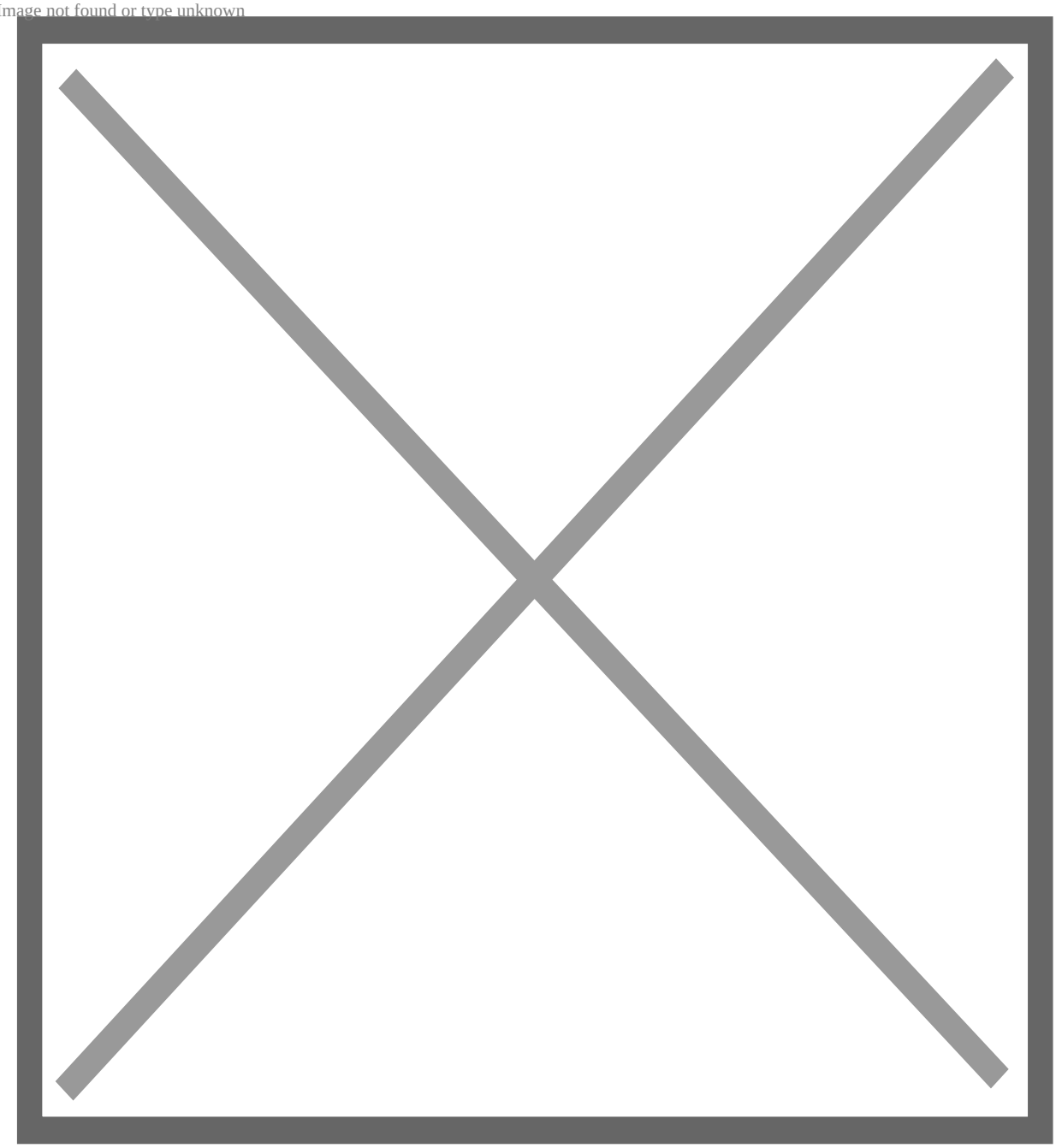

Map shows March 2019 rainfall as a percentage of the 1981-2010 climatological average

Less than halfway through the month, Northern Ireland had already reached its average rainfall total, and by March 18th enough rain had fallen to make March 2019 the wettest March on record in NI. A total 158.3mm of rain fell by the end of the month – two thirds more than the 95.1mm average, beating the previous wettest March record for NI from 1992 with 146.8mm.

It was the second wettest March on record for northwest England and North Wales with a total 192.3mm (182% of average) rain recorded, coming behind March 1981.

It wasn’t just a wet month though, it was also rather warm.

With a mean UK temperature of 6.8 C (1.3 C above average), March 2019 provisionally comes in 10th for the warmest March on record.

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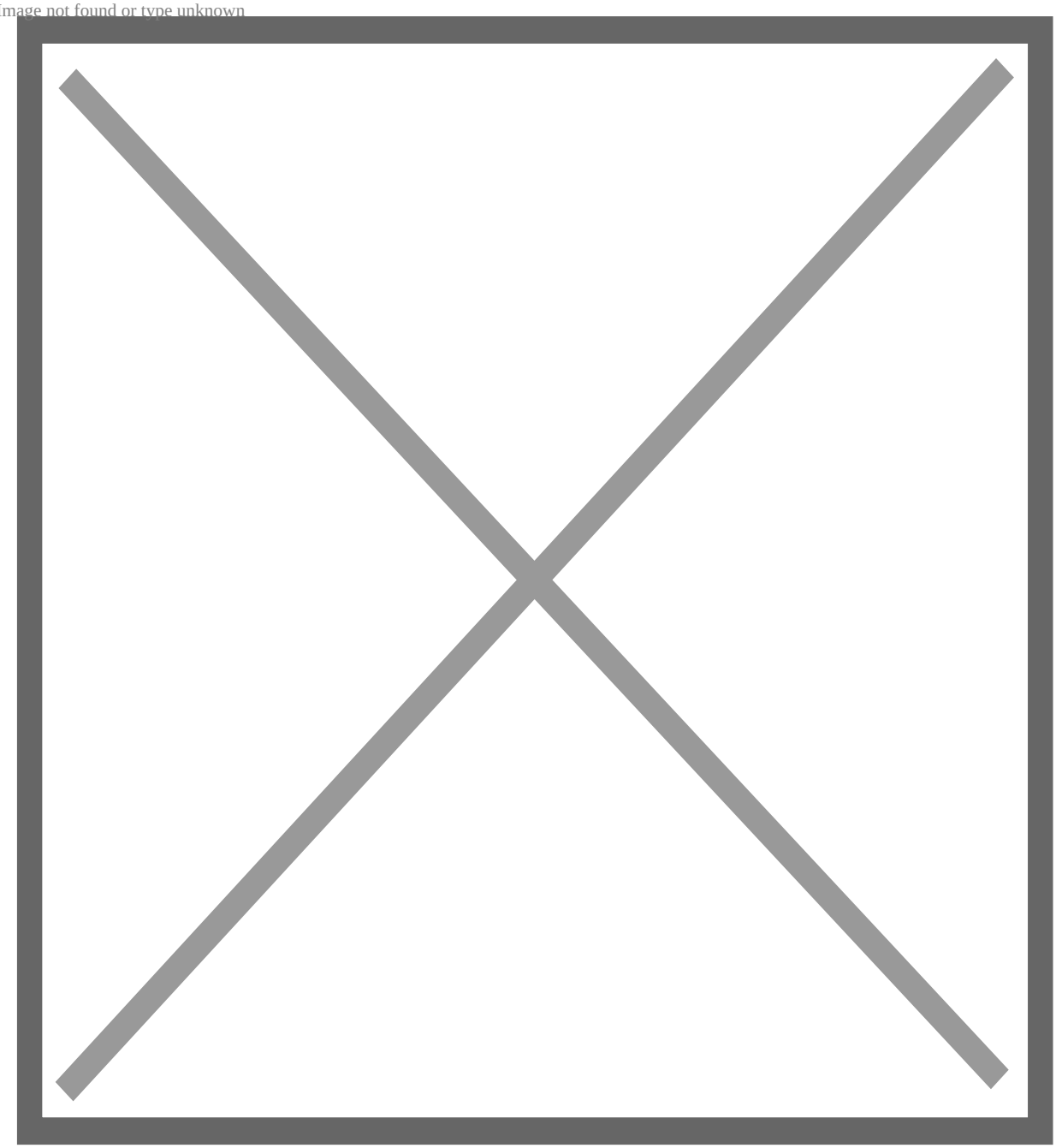

Map shows March 2019 mean temperature as a percentage of the 1981-2010 climatological average

Towards the end of the month high pressure brought settled, dry and sunnier weather, compensating for the rather wet first half to the month and allowing sunshine hours to creep up, especially in east and southeast parts of the UK.

Overall March 2019 had slightly more sunshine than average with 115.6 hours recorded, 114% of the average for the time of year.

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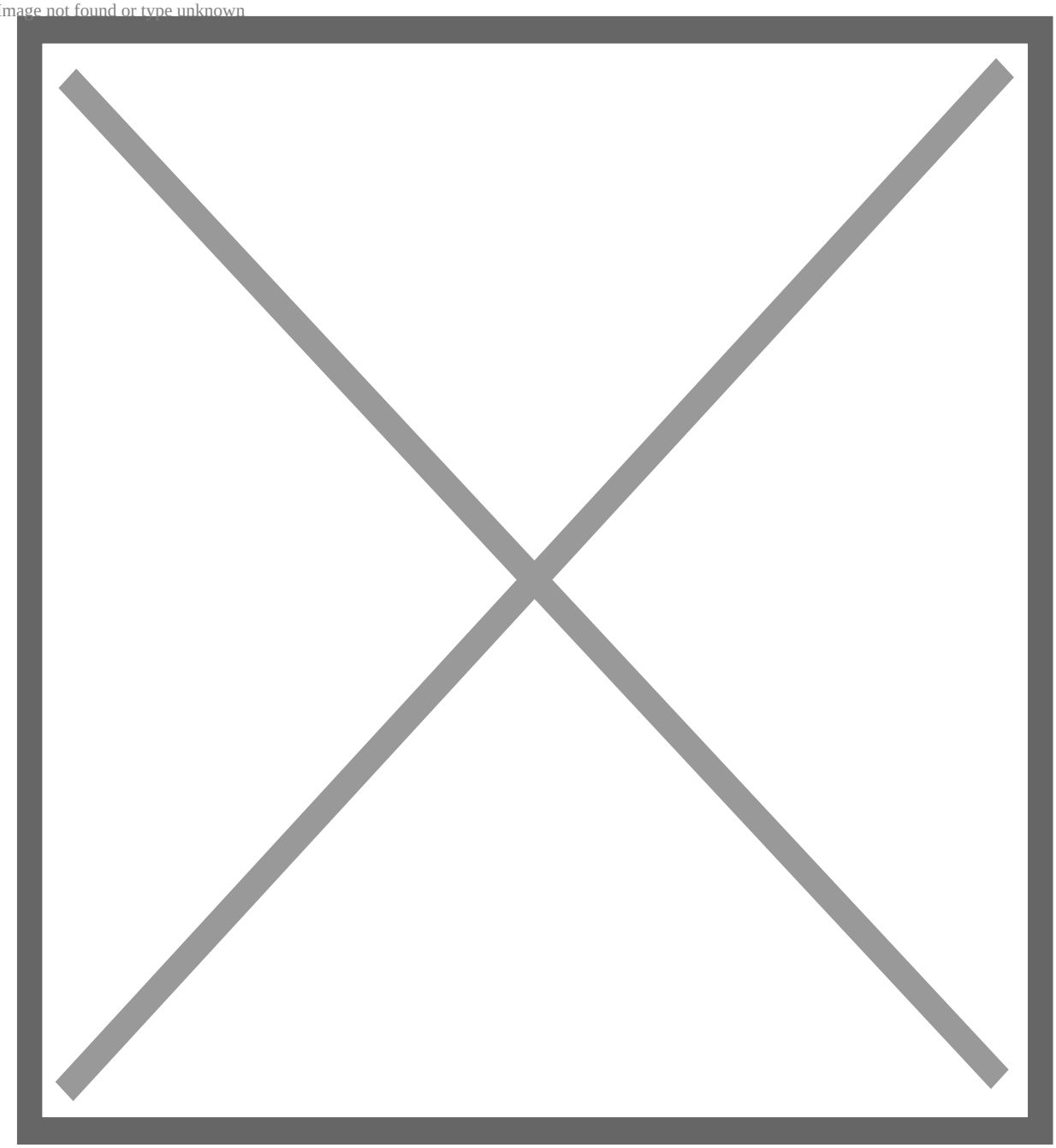

Map shows March 2019 sunshine hours as a percentage of the 1981-2010 climatological average

Extreme weather elements for March 2019 in the UK

Element	Value	Site	Date
Highest max	19.8C	Kew Gardens (London)	30th
Highest min	11.0C	Grangemouth (Stirlingshire)	21st
Lowest max	1.6C	Salsburgh (Lanarkshire)	16th
Lowest min	-6.9C	Aboyne (Aberdeenshire)	5th
Highest daily rainfall	74.6mm	Capel Curig (Gwynedd)	16th
Max gust	70kts	Needles (Wight)	16th
Sunniest day	12.6hrs	East Malling (Kent)	29th
Deepest snow depth	6cm	Middleton (Derbyshire) & Mugdock Park (Stirlingshire)	10th & 11th

Date Created
April 2019

My career in climate

Description

Sir David Attenborough looks at the science of and potential solutions to climate change in a new BBC Documentary (broadcast 9pm Thurs 18 April 2019). Met Office climate scientist Professor Peter Stott appears in the programme and also supported the BBC as they researched the facts. Here he looks back at his career and how the science of climate change has developed.

When I arrived at the Met Office in 1996, it was an exciting time to be starting climate research. Scientists were beginning to identify the fingerprints of human activities on climate. I joined a team of researchers who showed that warming temperatures were being caused not by increasing solar activity or natural climate oscillations but by the rising atmospheric concentrations of greenhouse gases. By the turn of the century, the conclusions of climate science were clear. Substantial reductions in greenhouse gas emissions would be needed to avoid the worst effects of a warming world. If this was not unexpected, being the inevitable result of basic physics, the new century brought a much more surprising revelation.

Whereas the large-scale climate trends panned out as climate models had predicted – with warming temperatures, melting ice and rising seas – I found the rapidly increasing toll of extreme weather startling and shocking. In August 2003 I travelled to Tuscany to celebrate my wedding anniversary in the hilltop town of San Gimignano. The heat that year was unprecedented. Temperatures reached 40 degrees for days on end. We could cope by keeping in the shade when the sun was up. But many others throughout Europe were not so lucky. More than 70,000 died from the heat, many of the fatalities being elderly vulnerable people unable to escape sweltering apartments in cities like Paris.

Professor Peter Stott

Returning home, I decided to investigate whether climate change could be implicated in this devastating event. My research, undertaken in collaboration with colleagues from Oxford University, showed that greenhouse gas emissions had more than doubled the risk of the extreme temperatures seen that summer

Ours was the first study to link climate change to a specific meteorological event. It showed that climate change was now no longer just a future threat, the threat was already here. It led me on to a whole new field of research, one that aims to help people cope better with heatwaves, floods and droughts by providing up-to-date information about the changing risks of such extreme weather.

While we can make efforts to adapt to our changing climate, the science shows this challenge becomes much harder if we don't also take action to mitigate its effects by reducing our emissions of greenhouse gases. The Met Office Hadley Centre is heavily involved in providing policy relevant advice to the UK government. As part of that role, I have been to some of the major climate conferences where nations decide on collective action on climate, including last year's COP meeting in Katowice, Poland.

There, I presented the latest data showing that the last 4 years were globally the warmest on record and I released new analysis of the extreme record breaking temperatures of last summer across Europe). I also attended an event with Greta Thunberg, the Swedish teenager who started a mass movement of school strikes on climate. I found it very inspiring to hear her speak so articulately. Thanks to her leadership, there is now a younger generation of citizens actively involved in promoting a

more sustainable future.

More and more, I realise, we need to talk more about climate change; its causes, effects and solutions. That is why I was delighted to be asked to be involved in the BBC documentary, Climate Change: The Facts. It chimes with a growing interest I have in science communication. As part of my joint position at the University of Exeter, I lead a project called Climate Stories. With a group of scientists from the Met Office and the University of Exeter, artists and local community groups, we have been writing poems, composing songs and making pictures to find new ways of talking about the work we do and connecting with wider audiences. Creating stories together has helped build new positive narratives about our changing climate.

Climate change is not an easy subject to talk about. Even though there are many possible ways to reduce our emissions it is still a challenging task. But like other difficult topics, talking about it helps. When we do, the future can look a whole lot more hopeful.

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April 2019